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# INIS ATOMINDEX

AN INTERNATIONAL ABSTRACTING SERVICE

# ИНИС АТОМИНДЕКС

CUMULATIVE INDEX

VOLUME 10  
January-June 1979

Part 5:  
Subject Index M-Z



INTERNATIONAL ATOMIC ENERGY AGENCY, VIENNA, 1979

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In addition the following international and regional organizations have formally accepted an invitation to participate in INIS:

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 Council for Mutual Economic Assistance (CMEA)  
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 International Commission on Radiological Protection (ICRP)  
 International Organization for Standardization (ISO)  
 Joint Institute for Nuclear Research (JINR)  
 Nuclear Energy Agency (NEA)  
 Organization of African Unity (OAU)  
 United Nations (UN)  
 World Energy Conference (WEC)  
 World Health Organization (WHO)

The Agency's Statute was approved on 23 October 1956 by the Conference on the Statute of the IAEA held at United Nations Headquarters, New York; it entered into force on 29 July 1957. The Headquarters of the Agency are situated in Vienna. Its principal objective is "to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world".

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# INTRODUCTION

## The International Nuclear Information System (INIS)

INIS is a cooperative, decentralized information system set up by the International Atomic Energy Agency and its Member States. Its purpose is to construct a data base identifying publications relating to nuclear science and its peaceful applications. Member States and cooperating international organizations scan the scientific and technical literature published within their boundaries or by them, select from it those items which fall within the subject scope of INIS<sup>1)</sup> and process the data according to the agreed standards and rules. Document descriptions, abstracts and, in certain cases, full texts of the literature are then submitted to the IAEA Headquarters, where those data are merged and the INIS output products compiled. The following services are issued:

- The INIS magnetic tape service
- INIS Atomindex: a semi-monthly abstracting journal<sup>2)</sup>
- INIS non-conventional literature on microfiche<sup>3)</sup>

## Availability and price of INIS services

### MAGNETIC TAPE SERVICE

This semi-monthly service, providing magnetic tapes containing all records submitted to the system, is available only to participating Member States and International Organizations. National INIS centres in many countries are utilizing INIS tapes in the provision of national information services. Available services vary from country to country and interested persons are requested to contact their national INIS Liaison Officer whose name and address appear on the inside cover of this journal.

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<sup>1)</sup> The scope of INIS is defined by the scope of the IAEA's interests. Full details of the INIS scope are printed in IAEA-INIS-3, INIS: Subject Categories and Scope Descriptions. This is a publication in the INIS Reference Series which defines the standards and rules for INIS. Copies of all documents in the INIS Reference Series are available from the IAEA, Vienna.

<sup>2)</sup> INIS Atomindex is prepared from the semi-monthly INIS magnetic tapes by computer-driven photocomposition methods. The bulk of the information contained in the magnetic tapes is printed in INIS Atomindex. The major exception to this are the subject descriptors, whose main use is for computer-searching. These are omitted from all INIS Atomindex entries that are accompanied by abstracts.

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Back copies of most issues of INIS Atomindex published since April 1970 are still available.

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## CUMULATIVE INDEXES

Cumulative indexes to INIS Atomindex are published twice yearly covering the twelve issue indexes published in the months of January to June and July to December. The present Cumulative Index covers issues 1–12 of Vol.10 i.e. the issues published from 1 January to 15 June 1979. It consists of:

Part 1: Personal Author Index: A–L;  
Part 2: Personal Author Index: M–Z;  
Part 3: Corporate Entry Index,  
Conference Index,  
Report, Standard and Patent Number Index;  
Part 4: Subject Index: A–L;  
Part 5: Subject Index: M–Z.



Previous Cumulative Indexes have been published, as follows:

| Issues Covered                | Price                     |
|-------------------------------|---------------------------|
| Vol. 1, No. 1 – Vol. 3, No. 4 | Austrian Schillings 216,– |
| Vol. 3, Nos. 5–12             | Austrian Schillings 144,– |
| Vol. 4, Nos. 1–12             | Austrian Schillings 90,–  |
| Vol. 4, Nos. 13–24            | Austrian Schillings 90,–  |
| Vol. 5, Nos. 1–12             | Austrian Schillings 135,– |
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| Vol. 8, Nos. 1–12             | Austrian Schillings 325,– |
| Vol. 8, Nos. 13–24            | Austrian Schillings 325,– |
| Vol. 9, Nos. 1–12             | Austrian Schillings 325,– |
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|                     |               |
|---------------------|---------------|
| RN 419365–RN 421704 | Vol.10, No. 1 |
| RN 421705–RN 424079 | Vol.10, No. 2 |
| RN 424080–RN 427594 | Vol.10, No. 3 |
| RN 427595–RN 431157 | Vol.10, No. 4 |
| RN 431158–RN 434041 | Vol.10, No. 5 |
| RN 434042–RN 438448 | Vol.10, No. 6 |
| RN 438449–RN 442224 | Vol.10, No. 7 |
| RN 442225–RN 446348 | Vol.10, No. 8 |
| RN 446349–RN 450215 | Vol.10, No. 9 |
| RN 450216–RN 453129 | Vol.10, No.10 |
| RN 453130–RN 456546 | Vol.10, No.11 |
| RN 456547–RN 459654 | Vol.10, No.12 |

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Examples:

- Berg, B.**  
Additional conservation laws in the Thirring model. 264528  
Particle number conservation in the massive Thirring model. 264527
- Berg, C.J.M. van den**  
Coded aperture imaging and the introduction of the modulated zone plate in nuclear medicine. (CEA–CR–6) 251473  
A refocussing filter based on Fridman's theorem, applied to Tl–201 myocardial scintigrams. (CEA–CR–6) 251497
- Van De Woestijne, K.P.**  
Horizontal gradient in ventilation distribution due to a localized chest wall abnormality. 255646
- Van den Berg, J.A.**  
Equilibrium studies of the uranyl oxalate system in acidic aqueous solution. 270151

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Examples:

- Agence Nationale de Valorisation de la Recherche (ANVAR), 92 – Paris-Defense (France)**  
Process and devices of detection of hard electromagnetic or particle radiations using a superconducting element. 433824  
Process for obtaining oxygen doped zinc telluride monocrystals and scintillator crystals obtained by this process. 444113  
System for the high speed cathodic spraying of a deposit. 432647
- Anderson (M.D.) Hospital and Tumor Inst., Houston, TX (USA)**  
Radiation and biophysical studies on cells and viruses. Progress report 1 July 1977 – 30 June 1978. (ORO – 2832-192) 436972
- ANVAR, 92 – Paris-Defense (France)**  
See Agence Nationale de Valorisation de la Recherche (ANVAR), 92 – Paris-Defense (France)
- Applied Decision Analysis, Inc., Menlo Park, CA (USA)**  
Methodology and preliminary models for analyzing nuclear safeguards decisions. (UCRL – 13931) 459620
- Applied Nucleonics Co., Inc., Los Angeles, CA (USA)**  
Summary of seismic assessment of underground and buried nuclear power plants. (ATR – 78(7652-01)2) 437244
- Arbeitsgemeinschaft Versuchs-Reaktor G.m.b.H., Duesseldorf (Germany, F.R.)**  
10 years of electricity generation with the pebble bed reactor of AVR. (INIS-mf – 4910) 452767

#### Conference Index

This index is divided into two parts. The first part is arranged in chronological order by the date of the meeting. Other information given includes the place (city or town) where the meeting was held, the name of the meeting, and the RN's of the main entries for all documents presented at, or resulting from the meeting and listed in the issues of **INIS Atomindex** covered by this cumulation.

The second part of the index repeats the above information but this time the entries are arranged in alphabetical order by the name of the place in which the meeting was held.

Examples:

- 76 Mar 1. Toulouse, France.** International colloquium on solar electricity. 293922.
- 76 Mar 2. Golden, CO, USA.** Interagency Mechanical Operations Group meeting. 283257, 284029.
- 76 Mar 9. Dublin, Ireland.** International conference on physics in industry. 297370, 297379, 297384, 297541, 298153, 298173, 298178, 298182, 298205, 298744, 299136, 299319, 299353, 299364, 299477, 299831, 299921, 299944, 300058.
- Glasgow, UK. 76 Apr 7.** Annual Chemical Congress. 287782.
- Goettingen, Germany, F.R. 75 May 26. 4.** German symposium on nuclear law. 290006, 290325, 290329, 290341, 290346, 290349, 290350, 291073, 291075, 291076, 291077, 291078, 291079, 291080, 291081, 291082, 291083, 291084, 291085, 291086, 291087, 291088, 291089, 291090, 291091, 291093, 291094.
- Golden, CO, USA. 76 Mar 2.** Interagency Mechanical Operations Group meeting. 283257, 284029.

#### Report, Standard and Patent Number Index

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- CEA-CONF**  
CEA-CONF–3695 313867 Copies available from Service de Documentation, CEN Saclay, BP No2, 91190 Gif-sur-Yvette (France).
- D**  
D-456228  
See N–76-22136
- DIN**  
DIN–25403(Pt.4) 315707 Publisher
- DOCKET-STN-5056**  
DOCKET-STN-50568–1 316143 INIS
- DP**  
DP–1452 315036 INIS



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The subject index also includes references from terms not adopted for indexing to the approved terms (descriptors) under which information may be found (see references); see also references are intended to guide the index user from one subject heading to another under which related material may also be indexed.

For additional guidance to subject headings under which references of interest might be found, see *INIS: Thesaurus (IAEA-INIS-13)*.

Examples:

### ALVEOLI (PULMONARY):

See *LUNGS*

### AMERICIUM:

#### electric conductivity

The electrical resistivity of  $^{241}\text{Am}$  metal. (B22). 354557

### AMERICIUM COMPOUNDS:

#### ion exchange chromatography

Separation of Am, Cm and rare-earths on the colloidal fraction of an anion-exchange resin deposited on an inert carrier. (B13). 354400

Separation of Am, Cm and rare-earths by continuous two-dimensional ion-exchange chromatography. (B13). 354405

### AMERICIUM ISOTOPES:

See also *AMERICIUM 241*

### AMERICIUM 241:

#### clearance

Decorporation of  $^{241}\text{Am}$  and  $^{252}\text{Cf}$  by Ca-DTPA from rat, Syrian and Chinese hamster. (C21). 354868

#### electric conductivity

The electrical resistivity of  $^{241}\text{Am}$  metal. (B22). 354557

#### internal irradiation

The dosimetry of  $^{241}\text{Pu}$  reconsidered. (C55). 355044

### AMIDES:

See also *ACRYLAMIDE*

### AMINES:

See also *ANILINE; HYDROXYLAMINE; TRYPTAMINES*

#### liquid column chromatography

Use of high performance liquid chromatography to separate very small quantities of radio-labelled metabolites from biological tissue. (C42; Acaricides; amitraz). 354909

### AMINO ACIDS:

See also *CYSTEINE; DTPA; FOLIC ACID; KYNURENINE; THYROXINE; TRYPTOPHAN*

### AMINO BENZENE:

See *ANILINE*

### AMMONIA:

#### electron-molecule collisions

Differential cross sections for 35keV electrons elastically scattered from  $\text{NH}_3$ . (A12). 353297

### AMMONIUM COMPOUNDS:

#### neutron diffraction

Studying the rotation of the  $\text{NH}_4$  ion in ammonium chloride by means of high-resolution neutron spectroscopy. (A13, B12). 353495

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Availability: All nuclear documents published in Portugal: free of charge

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Availability: Romanian nuclear literature supplied to centres in many countries on exchange basis

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Source: INIS Liaison Officer for Spain  
Availability: Photocopies: US \$0.10 per page  
Microfiches: US \$0.15 per page  
Reports (full size): prices as per catalogue  
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Source: INIS Liaison Officer for Sweden  
Availability: AB Atomenergi reports (full size): US \$5.00 each  
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Availability: Photocopies: prices on application

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In *INIS Atomindex*, the specific source for each US report is given with the abstract entry, together with the NTIS price code. The following table is an explanation of the code. Section A is the standard code and provides a code A01 for the Standard microfiche price of \$3.00 per title (\$4.50 for non-North American purchases), and

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*European Organization for Nuclear Research (CERN)*

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Availability:   Copies of documents: free on request

*Food and Agricultural Organization (FAO)*

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Availability:   FAO documents available for sale: prices vary

*International Atomic Energy Agency (IAEA)*

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England.

Availability:   Limited stocks of certain publications are available from the above address. ICRP will refer request for the remainder to its publishers.

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- laser isotope separation**
- Carbon-13 enrichment in the room temperature multiphoton decomposition of  $CF_3Br$ . (B12). 425539
- molecule-molecule collisions**
- Collisional relaxation of  $CO_2$  ( $X \rightarrow \Sigma'$ /sub g') ( $00^0_1$ ) and  $CO(X \rightarrow \Sigma'')$  ( $v=1$ ) by some perfluoroalkyl bromides and iodides. (A12). 434338
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- photolysis**
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- physical radiation effects**
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- ORGANIC INSULATORS:**
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- ORGANIC IODINE COMPOUNDS:**
- See also *IODODEOXYURIDINE; IODOURACILS; METHYL IODIDE; ROSE BENGAL; THYROXINE*
- chemical reactions**
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- fluidized-bed combustion**
- Process for reducing the volume of radioactive ion exchange wastes. (E51). 446206
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- ORGANIC MERCURY COMPOUNDS:**
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- excretion**
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- metabolism**
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- quantitative chemical analysis**
- Radiochemical determination of methylmercury in fish. (B11). 436214
- ORGANIC MODERATED REACTORS:**
- See also *VIPER REACTOR; ZERLINA REACTOR*
- ORGANIC NITROGEN COMPOUNDS:**
- (Excluding those concepts included under the descriptors: PROTEINS, AMINES, ALKALOIDS, AMINO ACIDS, NUCLEIC ACIDS, and NUCLEOTIDES.)
- biological effects**
- Comparison of spontaneous, UV-induced, and nitrosoguanidine-induced mutability to drug resistance in myxobacteria. (C12; Polyangium luteum, Myxococcus xanthus). 448538
- Effect of ultraviolet light on dinitrochlorobenzene-specific antigen-presenting function. (C11). 448504
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- chemical reaction kinetics**
- Proton magnetic resonance study of ligand exchange on tetrakis (hexamethylphosphoramide) dioxouranium(VI). (B13). 436424
- chemical reactions**
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- nuclear quadrupole resonance**
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- optical properties**
- Effect of combined influence of thallium impurity and X radiation low doses on optical and dielectric properties of triglycine sulfate. (B25). 444706
- photochemistry**
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- Significance of a secondary deuterium isotope effect in the photorearrangement of 1-iminopyridinium ylides. (B12). 440470
- radiopharmaceuticals**
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- radiosensitivity**
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- Studies on the toxicity and radiosensitizing ability of misonidazole under conditions of prolonged incubation. (C11; Increased uptake, toxicity, and radiosensitizing effect in CHO cells under hypoxic conditions). 441108
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- solubility**
- Solvent effects and secondary isotope effects for probing diradical character in the thermal decarboxylation of  $\beta$ -peroxylactones. (B12, B11). 422989
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- Studies on the toxicity and radiosensitizing ability of misonidazole under conditions of prolonged incubation. (C11; Increased uptake, toxicity, and radiosensitizing effect in CHO cells under hypoxic conditions). 441108
- ORGANIC OXYGEN COMPOUNDS:**
- (Excluding those concepts included under the descriptors: HYDROXY COMPOUNDS, CARBONIC ACID DERIVATIVES, LIPIDS, ORGANIC ACIDS, ALDEHYDES, KETONES, and

- ESTERS.)
- chemical reaction yield**  
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- chemical reactions**  
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- radiation chemistry**  
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- radiolysis**  
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- ORGANIC PHOSPHORUS COMPOUNDS:**  
(Excluding those concepts covered by NUCLEIC ACIDS and NUCLEOTIDES.)  
*See also* HDEHP; LECITHINS; ORGANOPHOSPHINIC ACIDS; PHOSPHOCREATINE; PHOSPHOLIPIDS; PHOSPHONATES; PHOSPHONIC ACID ESTERS; PHOSPHORIC ACID ESTERS; TBP; UDPG
- chemical preparation**  
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- Synthesis, properties, and structure of iodosulfinate salts. (B12); Shows stereoplot of the structure of [PPh<sub>3</sub>Bz] (ISO<sub>2</sub>). 422987
- chemical radiation effects**  
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- chemical reaction kinetics**  
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- ORGANIC POLYMERS:**  
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- additives**  
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Development of rubidium and niobium containing plastic foams. Final report. (B24). 436762
- chemical radiation effects**  
A radiation service centre for research and large-scale irradiation. (D23). 423674
- Structural changes in tetrafluoroethylene with ethylene copolymer during γ-irradiation. (B14). 423016
- cross-linking**  
Preparation of plastic-cellulose compounds by high energy gamma radiation. (D23). 430464
- deuterium compounds**  
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- electric conductivity**  
Preparation of conducting solid mixtures. (C15). 445039
- electron-molecule collisions**  
Radiation electric conductivity of polymeric materials. (B25). 451924
- electron energy loss spectroscopy and the optical properties of polymethylmethacrylate from 1 to 300 eV. (A12). 427856**
- fabrication**  
Development of rubidium and niobium containing plastic foams. Final report. (B24). 436762
- Preparation of conducting solid mixtures. (C15). 445039
- moessbauer effect**  
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- neutron diffraction**  
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- nuclear engineering**  
Plastics in nuclear technology. (B24, B25). 423204
- oxidation**  
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- radiation detection**  
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- radiation effects**  
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- Effect of ionizing radiation on visco-elastic properties of polymethylmethacrylate and poly-4-methylpentene-1. (B25). 444720
- Effects of gamma-irradiation of plastics on migration of constituents into test foods. (B14, B25, C22). 420456
- radiolysis**  
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- reactor materials**  
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- ORGANIC SOLVENTS:**
- electron mobility**  
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- luminescence**  
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- organic ion exchangers**  
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- ORGANIC SULFUR COMPOUNDS:**  
*See also* BAL; BENZOTHAIAZOLES; CHLORPROMAZINE; CYSTAMINE; CYSTEINE; CYSTINE; DISULFIDES; DMSO; EMS; HEPARIN; MEA; METHIONINE; METHYLENE BLUE; MMS; SACCCHARIN; SULFONIC ACIDS; SULFURIC ACID ESTERS; TAURINE; THIAMINE; THIOCYANATES; THIOIC ACIDS; THIOLS; THIONINE; THIOUREA; THIOUREAS
- chemical preparation**  
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- chemical reaction yield**  
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- chemical reactions**  
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- Preparation and crystal structure of oxotechetium bis(thiomercaptoacetate) and its relationship to radiopharmaceuticals labeled with <sup>99m</sup>Tc. (B13). 440569
- Synthesis and characterization of new metal-metal bonded species. 3. Dimeric tantalum(III) halide adducts with tetrahydrothiophene. Characterization of structure-bonding features through NQR spectroscopy. (B12, B11). 444152
- electronic structure**  
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Molybdenum enzyme model studies. Synthesis and structure of the oxo-bridged binuclear complex, μ-oxo-bis[oxo(2,2'-methyliminodithianethiolato)molybdenum(V)], Mo<sub>2</sub>O<sub>5</sub>[NCH<sub>3</sub>(C<sub>2</sub>H<sub>4</sub>S)]<sub>2</sub>. (B12). 425617
- radiolysis**  
Radiation induced free radical formation in sulfur-substituted purines. 6-Mercaptopurine at 77 K. (B14). 429593
- Reactions of free radicals produced from organic compounds in aqueous solution by means of radiation. (B14). [Data] 444286
- ORGANOIDS:**  
*See also* ENDOPLASMIC RETICULUM; LYOSOMES; MITOCHONDRIA; RIBOSOMES
- vinblastine**  
Characterization of acetyl-<sup>3</sup>H-labelled vinblastine binding to vinblastine-tubulin crystals. (C21, C31). 420988
- ORGANOMETALLIC COMPOUNDS:**  
(For compounds of metals and semimetals with organic compounds, but only when the metal or semimetal is directly bound to carbon.)
- chemical preparation**  
Hydrides of bis(h<sup>3</sup>-cyclopentadienyl)tungsten containing germanium or tin-transition metal bonds. (B12). 436379
- Investigation of composition of organic impurities in products of bisethyl-benzene chromium, -molybdenum, -vanadium synthesis. (B12). 444187
- Radiation chemical synthesis of ethylarylhalogen silanes. (B14). 444290
- Synthesis of symmetric and asymmetric diaryl tellurium dichlorides. (B12). 458125
- chemical properties**  
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- chemical radiation effects**  
Paramagnetic damage in X-irradiated tetraphenyltin: probable trapping of Ph<sub>3</sub>Snsp(•). (B14). [Data] 447939
- chemical reactions**  
Interaction of dicyclopentadienyl niobium dichloride with bis(triethylgermyl)cadmium. (B12). 454301
- Some reactions of lithium derivatives of cyclopentadienyltricarboxylmanganese and cyclopentadienyltricarboxylrhenium in tetrahydrofuran. (B12). 420309
- chemistry**  
Bis(pentamethylcyclopentadienyl)actinide chemistry: properties of stable thorium and uranium dialkyls and hydrides. (B12). 425565
- covalence**  
Covalency of neptunium(IV) triscyclopentadienyl compounds from Moessbauer spectra. (B13). 454495
- decomposition**  
Study of decomposition of tungsten perdeuteromethyl derivatives and ways of formation of carbene complexes. (B12). 454442
- gas chromatography**  
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- lattice parameters**  
Organometallic intercalates of the layered transition-metal dichalcogenides  $TaS_2$  and  $ZrS_2$ . (B12). 454295
- mass spectra**  
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- quantitative chemical analysis**  
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- reduction**  
Reduction of diaryl tellurium oxides. (B12). 458107
- structural chemical analysis**  
Structures and energetics of planar and tetrahedral dilithiomethane. A near degeneracy of singlet and triplet electronic states. (B12). 447860
- Structures of some organometallic ions from NMR oriented species. (A13, B12). 428024
- ORGANOPHOSPHINIC ACIDS:**
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- ORGANS:**  
*See also more specific entries as listed in the INIS Thesaurus.*
- activation analysis**  
INNA of human and mammalian tissue and organs. (B11). 443879
- Partial body in-vivo neutron activation using a flexible irradiation system capable of prompt, delay and cyclic analysis. (B11). 443877
- radiation doses**  
Estimate of 50-year dose commitment to various organs and tissues of the body from inhalation of  $^{222}Rn$  free of its daughters. (C21). 437071
- scintiscanning**  
Transverse section reconstruction of gamma-ray emitting radionuclides in patients. (C62; /sup 99mTc,  $^{129}Cs$ ,  $^{201}Tl$ ). 452366
- ORGDP:**  
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